

Exhibit K- Torchlight Energy Resources, Inc. Orogrande Basin Technical Presentation

Torchlight Energy Resources, Inc.

Orogrande Basin Technical Presentation

Confidential to Torchlight Energy Resources, Inc.

Contains privileged data requiring licensing before being disclosed.

Michael Zebrowski Consulting LLC



Yocogroup Energy Resources, Inc.

Organic Gas

Technical Presentation

Confidential to Yocogroup Energy Resources, Inc.

Cutline highlights date leading discussion before being discussed



Forward Looking Statements

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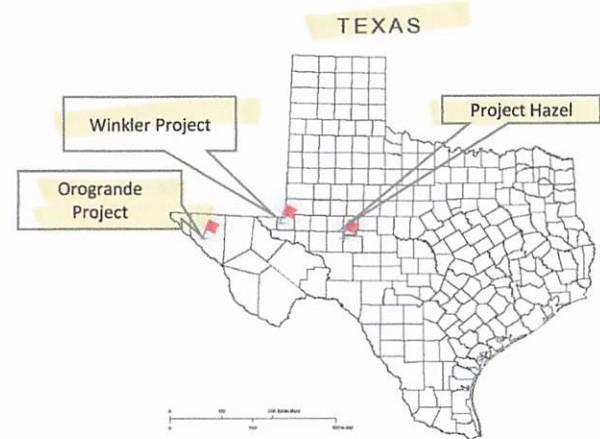
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Torchlight Overview

Corporate Highlights

- Focused on developing and producing Permian Basin assets, more specifically Orogrande
- Over 100,000+ net surface acres
- 2019 move to monetization of non-core assets and market the Company/Orogrande for sale to larger established public E&P (stock sale)
- Near term strategy:
 - Continue to define the Orogrande Projects potential and scalability
 - Hazel acreage being marketed to focus on Orogrande
 - Winkler acreage being monetized to focus on Orogrande



Market Summary

Shares Outstanding:	72 MM
Last Sale Price:	\$1.60
Market Cap:	\$110 MM
52 Week Range:	High: \$1.98 / Low: \$.53
Share Float:	73%
Insider Ownership:	27%
Average Daily Volume:	172,000 shares

Project	Gross Acres	Partner(s)	2018 D&C Wells
Orogrande Project	134,000	Wolfbone Investments	3
Project Hazel	12,000	Private Family Offices	2
Winkler Project	1,000	MECO IV	1

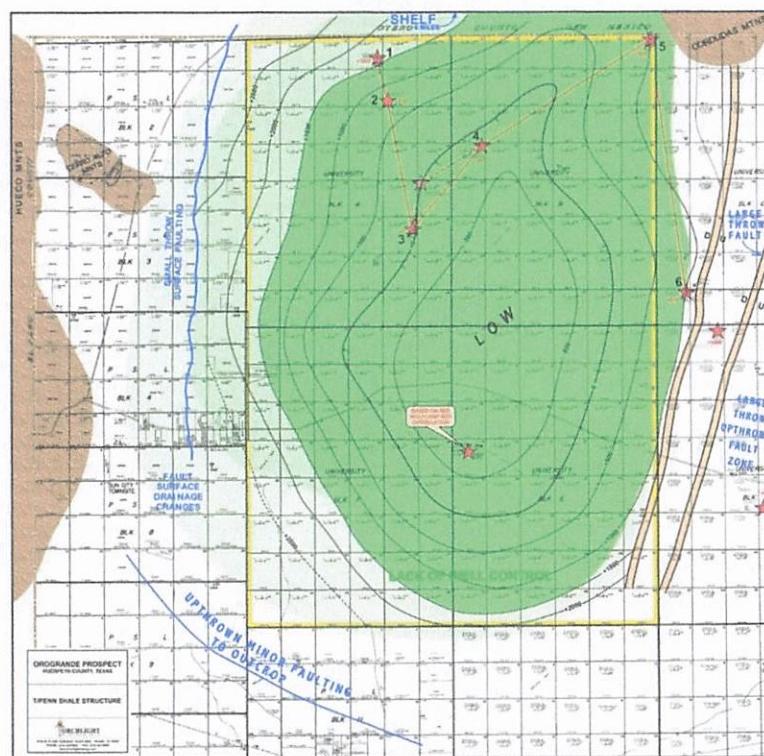
Orogrande Project – **NEW FIELD DISCOVERY**

Asset Overview

- 134,000 acres all under University Lands D&D Unit
- 72.5 % working interest
- 5 vertical test wells and 1 horizontal well successfully drilled to date
- Finished drilling 3 well program announced Q4
 - CONFIRMED STRUCTURAL PAY in ATOKA FORMATION
 - CONFIRMED SHALLOW PAY ZONES PRESENT (CONVENTIONAL WOLFCAMP)
- First 2018 horizontal well drilled, completed, shut in (Initial tests positive with 2.2 MMCFPD rate, sustained rate of 1.2MMCFPD)
- Confirmation of petroleum system in place

Target Bench Characteristics

- Oil and Gas expected – GOR approx. 1100
- Potential from Shallow Wolfcamp, Confirmed Penn Silt Package of over 600', confirmed structural pay from Atoka
- Pay zone depths – 3000' to 7000' with primary Unconventional Penn pay at 5300' to 5900'
- *New data suggests down hole pressure of .64 pressure gradient (over pressured)*
- Q4 wells tested shallower and deeper conventional zones and re-confirmed Penn Unconventional pay zones
- **Petrophysics results incorporated, 2D seismic, magnetics, and gravity being interpreted**

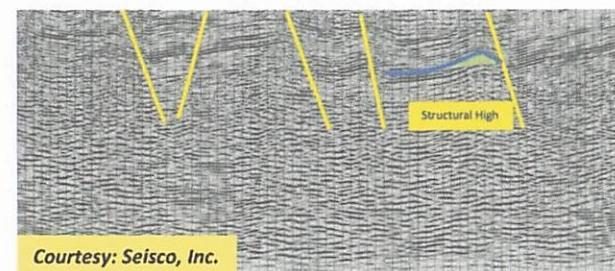
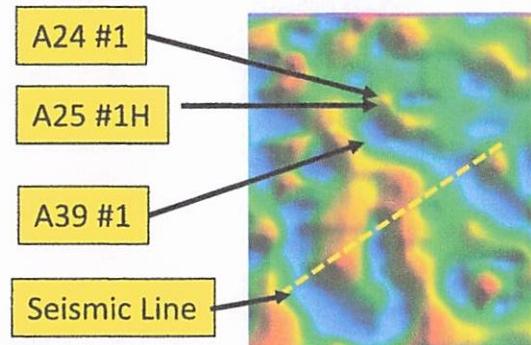


Orogrande Project – Conventional Potential

Requirements for Conventional

- Most large basins with proven unconventional hydrocarbon systems in place, also have areas with potential conventional pay
- Potential conventional pay zones can occur as 4-way closures/fault closures as structural features and also stratigraphic traps can occur in grabens, horst blocks, as well as pinch out trends
- TRCH has confirmed the existence of structural pay and potential 4 way closure with its A24 #1 well, 2D Seismic, Gravity and Magnetic information
- Early work shows potential of up to 20,000 acres of multiple conventional structural features
- Stratigraphic traps could increase the potential acres
- Gravity Map – (top right) Red/Yellow Features are Structural Highs
- Example Seismic Line Lower Right (Crosses a Structural High)

Gravity Map with Key Wells Torchlight Acreage Outline

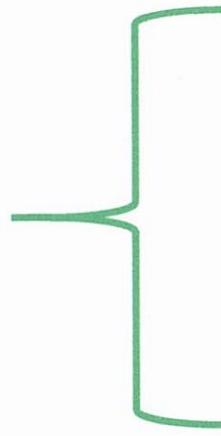


Example Seismic Line with Potential Structure Traps

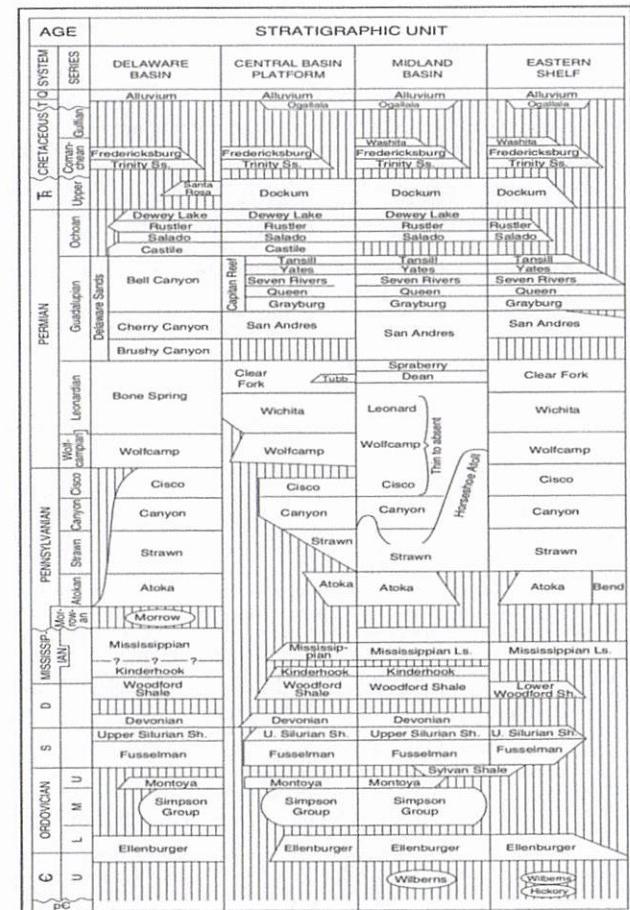
Orogrande Project – Potential Formations

Potential Unconventional & Conventional Zones

	Drill Depths
▪ Wolfcamp Unconventional	3000' - 3600"
▪ Penn Unconventional	4900' to 6000'
▪ Strawn	4000 to 6000'
▪ Atoka	4000 to 6500'
▪ Mississippian Lime	4000 to 7000'
▪ Devonian	
▪ Barnett /Woodford Unconventional	4500 to 7500'
▪ Fusselman	4500 to 8000'
▪ Montoya	4500 to 8500'
▪ Bliss	5000 to 9000'



Stratigraphic Units



Torchlight Energy Resources, Inc. - Project Overview

- Orogrande Basin - 134,000 Acres Under Lease
- Very Large Upside in Potential Hydrocarbon Resource, up to **3.7 Billion Barrels Recoverable @ 10%**
- 5 Pilot wells drilled for Technical Data Collection
- A25 #1H Well is Horizontal and Productive - produced at 2.2 MMCFPD
- A24 #1 Well is located on One of Several Prospective Structures, Demonstrated Oil on Pits
- Working Petroleum System
- Unconventional and Conventional Reservoir Targets
- Regional Technical Evaluation Ongoing
- Interpretation Project –Workstations to Show Potential Buyers



THE CHINESE IN AMERICA

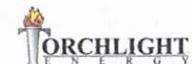
THE ECONOMIC CONSEQUENCES

Torchlight Acreage Resource Evaluation

- Stimulation Petrophysics completed the initial independent Resource Estimation, and Geomechanics work to identify landing zones for horizontal wells. While still ongoing initial reserve calculations indicate extremely favorable Resource numbers as follows:

• Primary Unconventional estimated reserves:	2,065 MMBOE recoverable reserves
• Additional Unconventional estimated reserves:	<u>1,609 MMBOE recoverable reserves</u>
• Total Possible Unconventional reserves:	3,674 MMBOE recoverable reserves

- Multi Billion Barrel Project
- First, there was Wolfberry. Then came Wolfbone. Introducing...WOLFPENN!!!
- Potential Landing Zones of 4-6+ in Wolfcamp Section
- Potential Landing Zones similarly 4-6+ in Penn Section
- Additional conventional oil potential in Atoka and deeper formations are currently under evaluation



Resource Estimation by Zone

Unconventional Recoverable Reserves Estimate

Primary Unconventional

• Wolfcamp pay zone	820 MMBOE	recoverable reserves
• Penn pay zone	1205 MMBOE	recoverable reserves
• Strawn pay zone	31 MMBOE	recoverable reserves
• Atoka pay zones	7 MMBOE	recoverable reserves

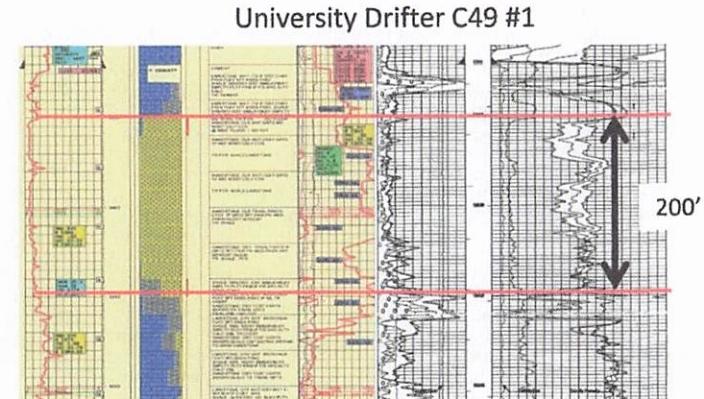
- Primary Unconventional sub-total estimated reserves: **2,065 MMBOE** recoverable reserves
- Additional Unconventional Potential
 - Barnett pay zone 591 MMBOE
 - Woodford pay zone 1018 MMBOE
- Additional Unconventional sub-total estimated reserves: **1,609 MMBOE** recoverable reserves
- Total Unconventional estimated reserves: **3,674 MMBOE** recoverable reserves

Conventional Oil Prospects Probabilistic Worksheet

A	B	C	D	E	F	G	H	I	J
1	Torchlight Conventional Oil Prospects							Oil	
2	March 12, 2019							Prospect	
3									
4				Low		BTE		High	
5	Input Data								
6	Oil Gravity (°API)	41°			41°			41°	
7	GOR (SCF/BBL)	450			450			900	
8	Gas gravity (AIR=1.0)	0.6			0.7			0.7	
9	Res Temp (°F)	100°			110°			115°	
10	Res Pressure (psia)	1,800			2,300			2,350	
11	Separator Pressure (psia)	120			120			120	
12	Separator Temp (°F)	100			100			100	
13	Calculated Data								
14	Bo	1.24	reservoir bbl/STB	1.24	reservoir bbl/STB	1.36	reservoir bbl/STB		
15	Bubble Point Pressure	1,793	(psia)	1,616	(psia)	2,934	(psia)		
16	Equilibrium Gas-Oil Ratio	452	(SCF/BBL)	684	(SCF/BBL)	692	(SCF/BBL)		
17	Compressibility @ Bubble-Point	1.3017E-05	(1/PSI)	1.04198E-05	(1/PSI)	2.01386E-05	(1/PSI)		
18	Oil Viscosity	1.090889	(CP)	1.018245	(CP)	0.678780	(CP)		
19	Geo Data								
20	Column Height	40	feet	100	feet	150	feet		
21	Porosity	6.0%	%	10.0%	%	14.0%	%		
22	Water Saturation	40.0%	%	30.0%	%	20.0%	%		
23	Area	5,000	acres	10,000	acres	20,000	acres		
24	Average Thickness	25	feet	30	feet	40	feet		
25	Recovery %	25%		30%		35%			
26	Results								
27	Volume	125,000	ac-ft	300,000	ac-ft	800,000	ac-ft		
28	Rec Fac-in place	225	bo/ac-ft	440	bo/ac-ft	638	bo/ac-ft		
29	Oil in Place	28,116	MBO	131,896	MBO	510,618	MBO		
30	Rec Fac-recoverable	56	bo/ac-ft	132	bo/ac-ft	223	bo/ac-ft		
31	Rec Fac-recoverable	60	boe/ac-ft	142	boe/ac-ft	257	boe/ac-ft		
32	Gas Reserves	3	BCF	18	BCF	60	BCF		
33	SARF	1	mbo/ac	4	mbo/ac	9	mbo/ac		
34	Oil Reserves	7	MMBO	40	MMBO	179	MMBO		
35	Total Reserves	8	MMBOE	43	MMBOE	192	MMBOE		
36	Comments								
37									
38									
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41									

This reserve analysis is for one single conventional pay zone.

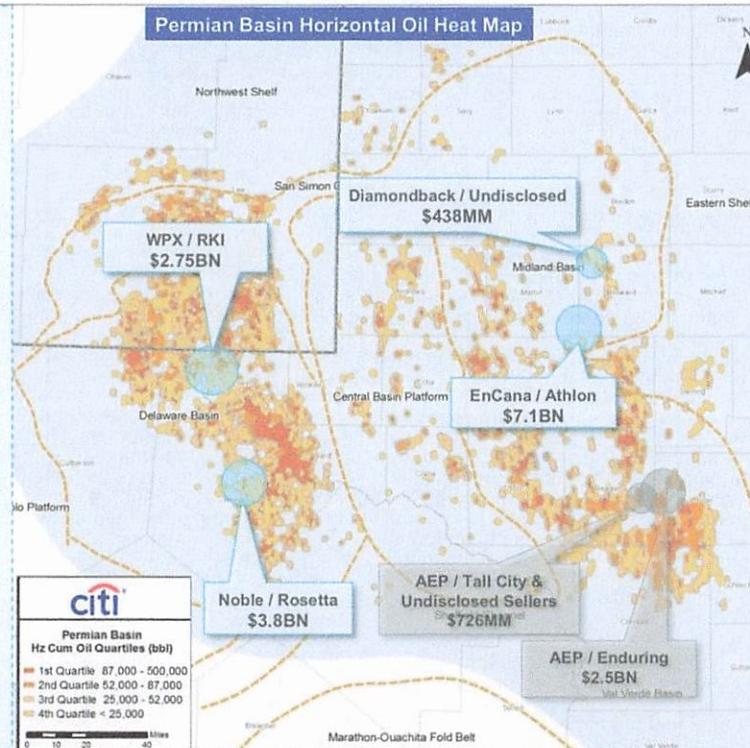
There are numerous opportunities for conventional zones within the Torchlight Energy acreage position.



Permian Basin Acreage Deals - Cost per Acre

Trend Setting Deals: New Entrants & Core Acreage Increased

- WPX's \$2.75 BN Delaware Basin Acquisition of RKG⁽¹⁾
 - *Entry Into the Permian Basin*
 - Headline \$ / Boe: \$22
 - Headline \$ / Boepd: \$102,000
 - Headline \$ / Acre: \$25,000
 - Adjusted \$ / Acre: \$12,500
- Noble's \$3.8 BN Corporate Acquisition of Rosetta (May 2015)
 - *Entry Into the Permian Basin*
 - Headline \$ / Boe: \$14
 - Headline \$ / Boepd: \$59,000
 - Headline \$ / Acre: \$84,000
 - Adjusted \$ / Acre: \$20,000
- Diamondback's \$438 MM Bolt-On Acquisition (May 2015)
 - Headline \$ / Boepd: \$176,000
 - Headline \$ / Acre: \$37,000
 - Adjusted \$ / Acre: \$24,000
- AEP's \$726 MM Bolt-on Acquisition (Oct. 2014)
 - Headline \$ / Boe: \$15
 - Headline \$ / Boepd: \$519,000
 - Headline \$ / Acre: \$27,000
 - Adjusted \$ / Acre: \$24,000
- EnCana's \$7.1 BN Corporate Acquisition of Athlon (Sept. 2014)
 - *Entry Into the Permian Basin*
 - Headline \$ / Boe: \$40
 - Headline \$ / Boepd: \$233,000
 - Headline \$ / Acre: \$50,000
 - Adjusted \$ / Acre: \$33,000
- AEP's \$2.5 BN Acquisition (June 2014)
 - *Entry Into the Permian Basin*
 - Headline \$ / Boepd: \$156,000
 - Headline \$ / Acre: \$40,000
 - Adjusted \$ / Acre: \$17,000

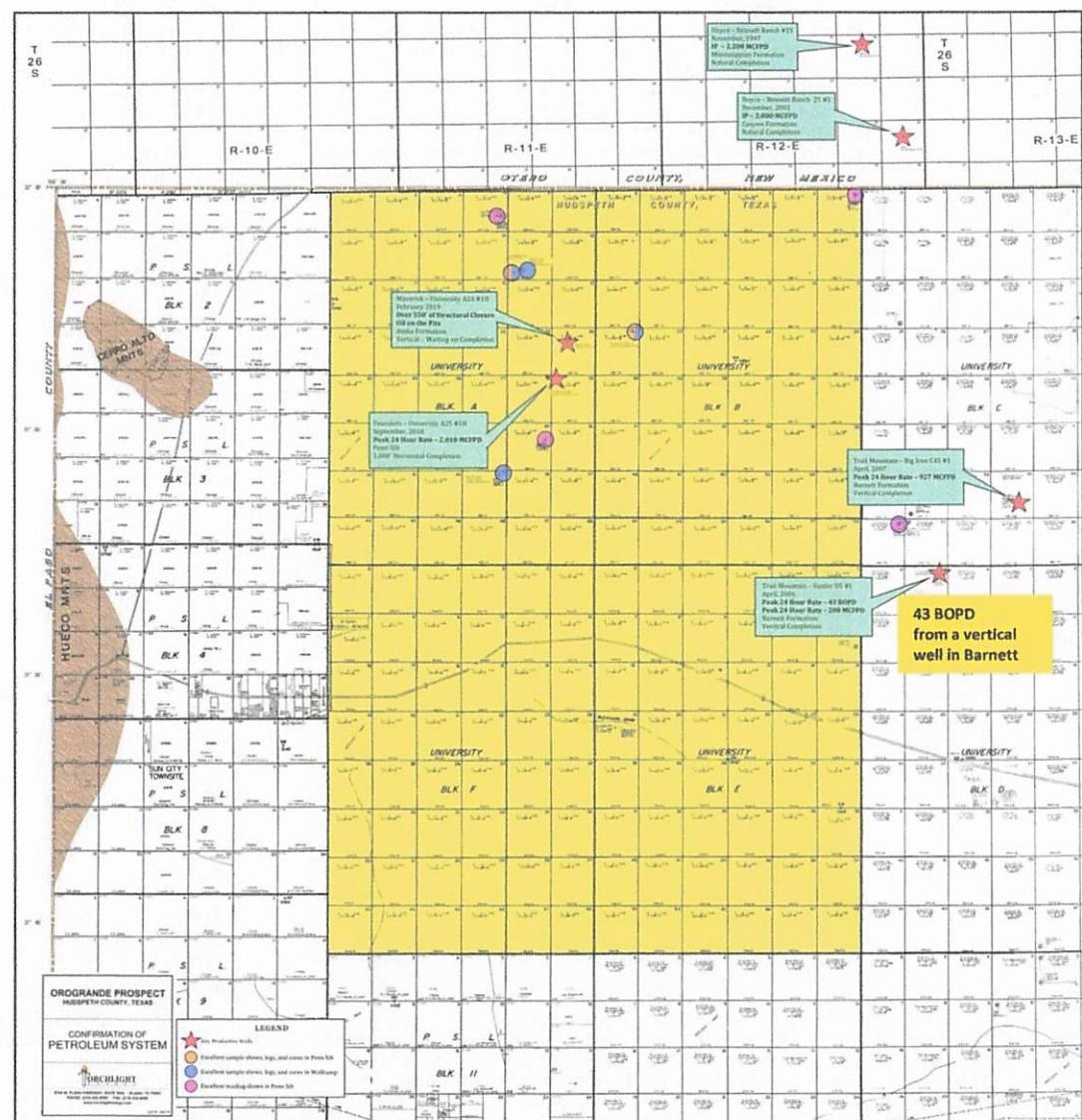
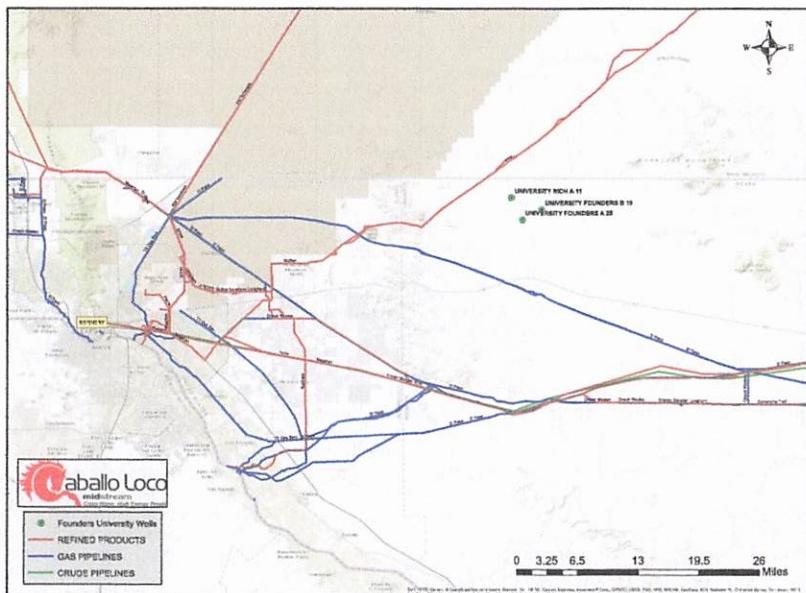


Source: IHS Herolda; PLS, Citi A&D, BEG, values rounded to the nearest 1,000
 (1) Metrics adjusted to only include upstream transaction value of \$2.25 BN

Torchlight Energy Acreage

Key Production Tests and Petroleum System Indicators

Pipeline Access Map



Gregory McCabe - *Chairman of the Board*

- Mr. McCabe, from Midland, Texas, is an experienced geologist who brings over 33 years of oil and gas experience to the Company.
- He is a principal of numerous oil and gas focused entities including McCabe Petroleum Corporation, Manix Royalty, Masterson Royalty Fund, and G-Mc Exploration.
- McCabe has been involved in numerous oil and gas ventures throughout his career and brings a vast experience in technical evaluation, operations and acquisitions and divestitures to the Torchlight Board.
- McCabe is Torchlight's largest shareholder and provided entry for the Company into its two largest assets, the Hazel Project in the Midland Basin and the Orogande Project in Hudspeth County, Texas.

Electron Microscopy - Overview of the Tools

Robert L Cook – *TRCH Director*

- Mr. Robert Lance Cook has more than 40 years of experience in the oil and gas industry where he held senior positions with Shell Oil as a Wells Engineer.
- Mr. Cook retired from Shell in 2016 after 36 years of service. He most recently held position as Chief Scientist for Wells and Production Technology.
- Cook helped conceive and develop the Sirius Well Manufacturing System (SWMS) JV; a Joint Venture company between Shell and China National Petroleum Company that builds specialized oilfield equipment for large scale development programs such as a 500 well Canadian development where well costs were halved compared to their previous conventional costs.
- Cook's role as Chief Scientist at Shell involved advising the Senior Executives on technical issues and working with leading internal and external scientists to help Shell stay at the forefront of energy technology innovation.
- During his career Mr. Cook has also been credited with over 100 oil and gas industry inventions.

Rich Masterson - *Consulting Geologist*

- Originated the Hudspeth County Orogrande Prospect as well as the Wolfbone Unconventional Play in the Delaware Basin where he has prepared prospects totaling over 150,000 acres that have been leased, drilled and currently being developed by: TROX, Eagle Oil and Gas/Rosetta/Devon, Browning Oil/ J Cleo Thompson/OXY, CWEI, EXL/Samson, Piedra/Brigham, Atlantic Exploration/Centennial, Energen, Anadarko, Shell/Chesapeake, Arabella Exploration, Red Willow, Concho and Petrohawk/BHP.
- Rich has created numerous prospects and discoveries throughout the Permian Basin, from 2500' TD to 17000' TD, since he began his career as a geologist with Texaco in 1974.
- Rich holds a BA in Geology from Trinity University in San Antonio, TX and is a member of the West Texas Geological Society.
- Received lifetime achievement award from colleagues for Wolfbone Play.

Michael Zebrowski - *Consultant*

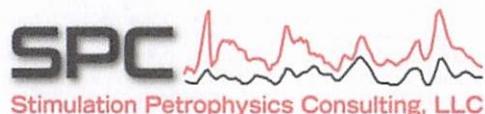
- Geoscience Management and Technical Roles with 43 Years of Industry Experience
 - Amoco
 - Mitchell Energy & Development
 - Hess 33 years
- Manager Global Conventional and Unconventional Hydrocarbon Projects, Onshore & Offshore
- Proven Oil Finder - Discovered 40 Oil and Gas Fields
- Lead Hess Special Commissioned Bakken Evaluation Team Project 40 Person Multi Disciplinary Team Members with Schlumberger, Lead Hess Paris Basin Unconventional Team
- Roles included Management, Geology, Geophysics, Petrophysics, Petroleum Systems, Well Operations Economics, Pore Pressure Global Hess Wells, Onshore/Offshore, Conventional, Unconventional
- Member of Hess Global Exploration Expert Team, Global Portfolio Analysis and Global Well Pressure/Design
- Manager of Geoscience Development at Hess. Trained over 100 Geoscientists in 12 Week Course
- Teach and Consult Post Retirement on Oil and Gas Exploration, at Hess Corporation
- Teach Industry Courses on Unconventional Oil and Gas Exploration/Development for Subsurface Consultants (SCA) Public Courses and Proprietary at Devon and Others.
- Wright State University Geology/Geophysics- Outstanding Alumni Award College of Science and Mathematics 2007

Daniel Zebrowski – *Consultant*

- EARTH DIMENSIONS INC., Houston, TX *Consultant*
 - Provided geologic/geophysical interpretations and evaluations to the petroleum and CCS industries. Consulting services included unconventional resources plays located in Denver Basin, Arkoma Basin, Permian Basin, Williston Basin, Appalachian Basin, etc. Advanced understanding of play analysis, reserve analysis, risk assessment and economics. Provided technical expertise in geosciences for unconventional resources plays. Identify and delineate sweet spot within emerging and developed unconventional resource plays within U.S. – Niobrara, Bakken, Utica, and Tuscaloosa, etc.
- VAALCO ENERGY (USA), INC., Houston, TX *Domestic Unconventional Team Leader*
 - Managed all domestic G&G activities for conventional and unconventional resource plays (15,000+ acres). Executed exploration/exploitation programs for assigned areas. Implement strategic technologies and best practices workflows (conventional & unconventional) for EGY core operating areas. Evaluation of over 45+ unconventional acreage opportunities and 20 conventional drilling opportunities.
- VERMILION COMPANIES, Houston, TX *Sr. Vice President/Exploration Manager – Exploration/Production*
 - Directed exploration staff of 12 which included geologists, geophysicists and support staff. Vermilion Companies and partners drilled the Eagle Mountain-Mary Rose #4 well and Mount Moran #1 in Eugene Island Block 10 wherein operator/partner, Contango booked over 600 BCFE gross reserves.
- SOUTHWESTERN ENERGY PRODUCTION COMPANY, Houston, Tx *Senior Staff Geophysicist/Unconventional Team Leader*
 - Original unconventional team member for Fayetteville shale team. Acquired 350,000 acres Implemented Fayetteville shale geophysical plans that resulted in acquiring 900+ sq. mi.'s of 3-D seismic data in the Arkoma Basin. Well costs were reduced and EUR per well increased. Developed new exploration strategies and areas. Assisted Senior VP Exploration on identifying new unconventional plays within US including Bakken, Marcellus, Wolfberry, Woodford and Barnett. Created exploration/exploitation methodologies for development of resource plays. SWN acquired over 100,000 acres in Appalachian basin and Permian basins.

Stimulation Petrophysics – Mike Mullen

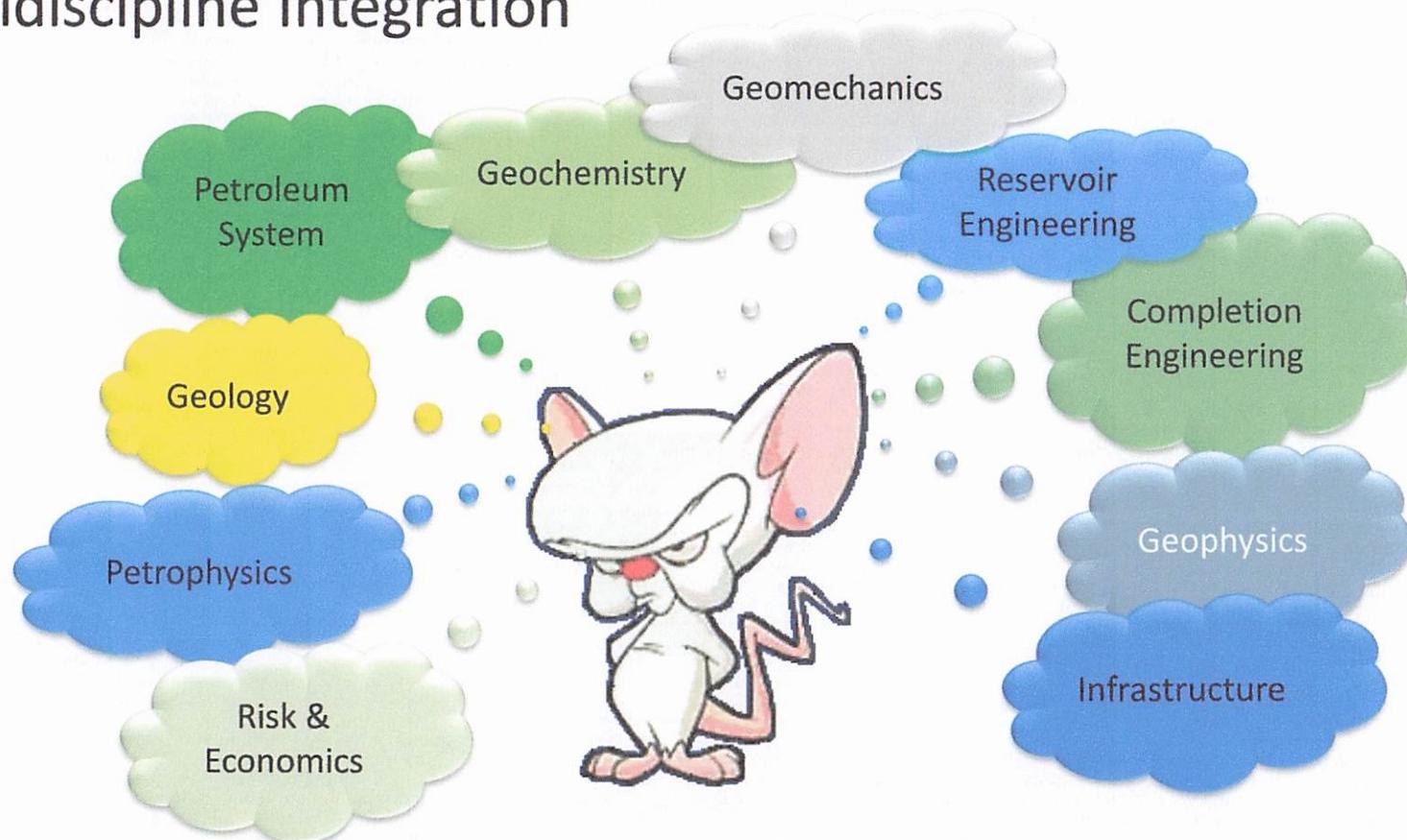
- Mike Mullen is the president and founder of Stimulation Petrophysics Consulting, LLC. He has over 42 years of oil field wireline logging and formation evaluation experience. During his 25-year career with Halliburton, he developed techniques for the analysis of conventional and unconventional reservoirs with a stimulation treatment design and optimization from wireline logging measurements.
- Mike was involved with the development of software models used by Halliburton throughout the world to evaluate Tight Sands, Shale Gas, Shale Oil and Coalbed Methane.
- He was also a leader of a multidisciplinary team to identify completion and stimulation “best practices” by conducting studies integrating petrophysics, stimulation techniques and production. Mike has been involved with over 30 technical papers on formation evaluation and one textbook on Coalbed Methane.
- Performing the duties of a Chief Operating Officer for Realm Energy International, Mike was instrumental working with government officials, potential JV partners and investor relations.
- He also led an integrated team of geoscientists to explore for shale gas and shale oil in France (**Team leader at same time as I was Hess Paris Basin Lead**), Poland, Germany and Spain.
- Mike holds a Bachelor of Science degree in Electrical Engineering from the University of Missouri – Rolla, 1976, and is a registered professional petroleum engineer in New Mexico and Colorado.
- **Performed Independent Resource Evaluations in place of STOOIP MMBOE/Section on initial Torchlight Wells. Recently completed petrophysical analysis on all TRCH wells and additional wells within project area.**



Torchlight Orogrande Project

- Interpretation Project Using Seismic, Gravity, Magnetics and Well Control Ongoing
 - Seismic was identified and licensed
 - A larger grid of seismic to better define play including Conventional Plays
 - Integrating all the data will better define project
 - Play areas, extent, sweet spots
 - Potential structures visible and can be mapped effectively
 - Hazard zones for drilling can be identified
 - Potential faults, for drilling avoidance
 - Identify volcanics, heat flow regions
 - Unconventional Plays almost always have elements and influences of traditional trap types

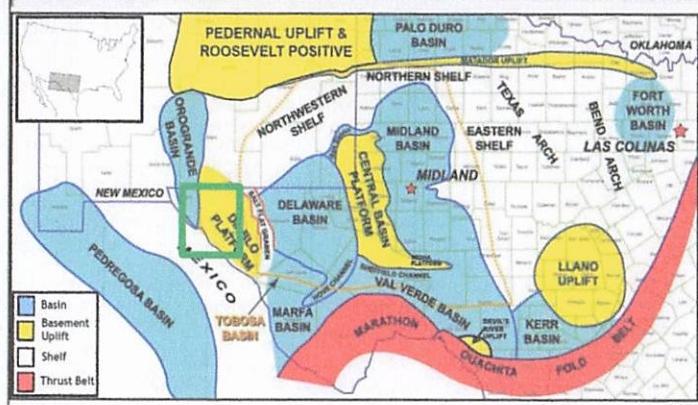
Multidiscipline Integration



G&G Evaluation Project Plan

- Michael Zebrowski and Daniel Zebrowski - Provide Consulting G&G for Project
- Rich Masterson- Project Geologist (proven oil finder) also working on Project
- Integrated Efforts
 - Petrophysics Detail by *Stimulation Petrophysics – Mike Mullen*
 - Mechanical Earth Model
 - Fracture Model
 - Cement Plan Optimization
 - IHS Kingdom and Petra Workstation
 - Interpretations
 - Cross-Section Analysis

Geologic Provinces of the Permian Basin



Source : Pioneer Natural Resources

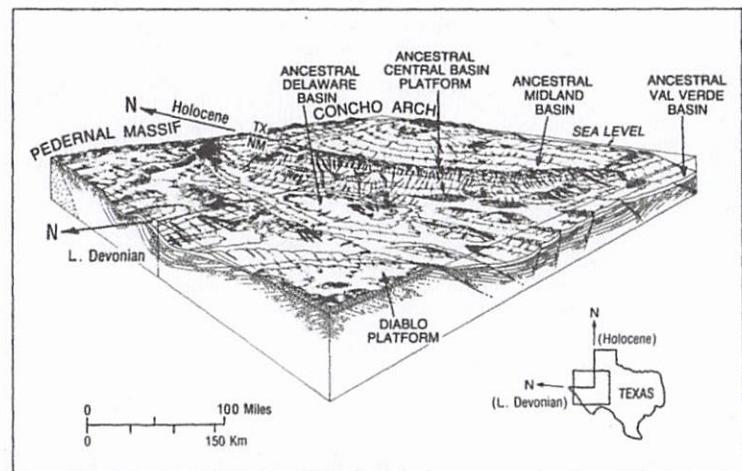
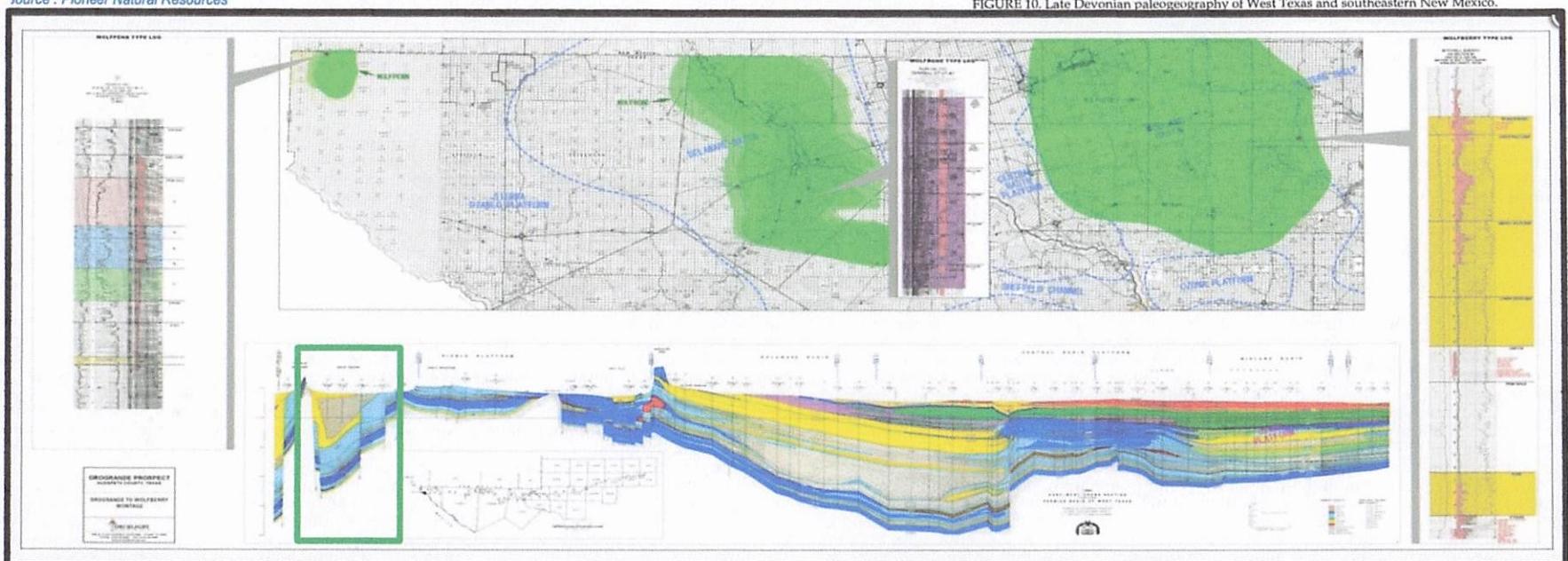
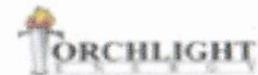


FIGURE 10. Late Devonian paleogeography of West Texas and southeastern New Mexico.



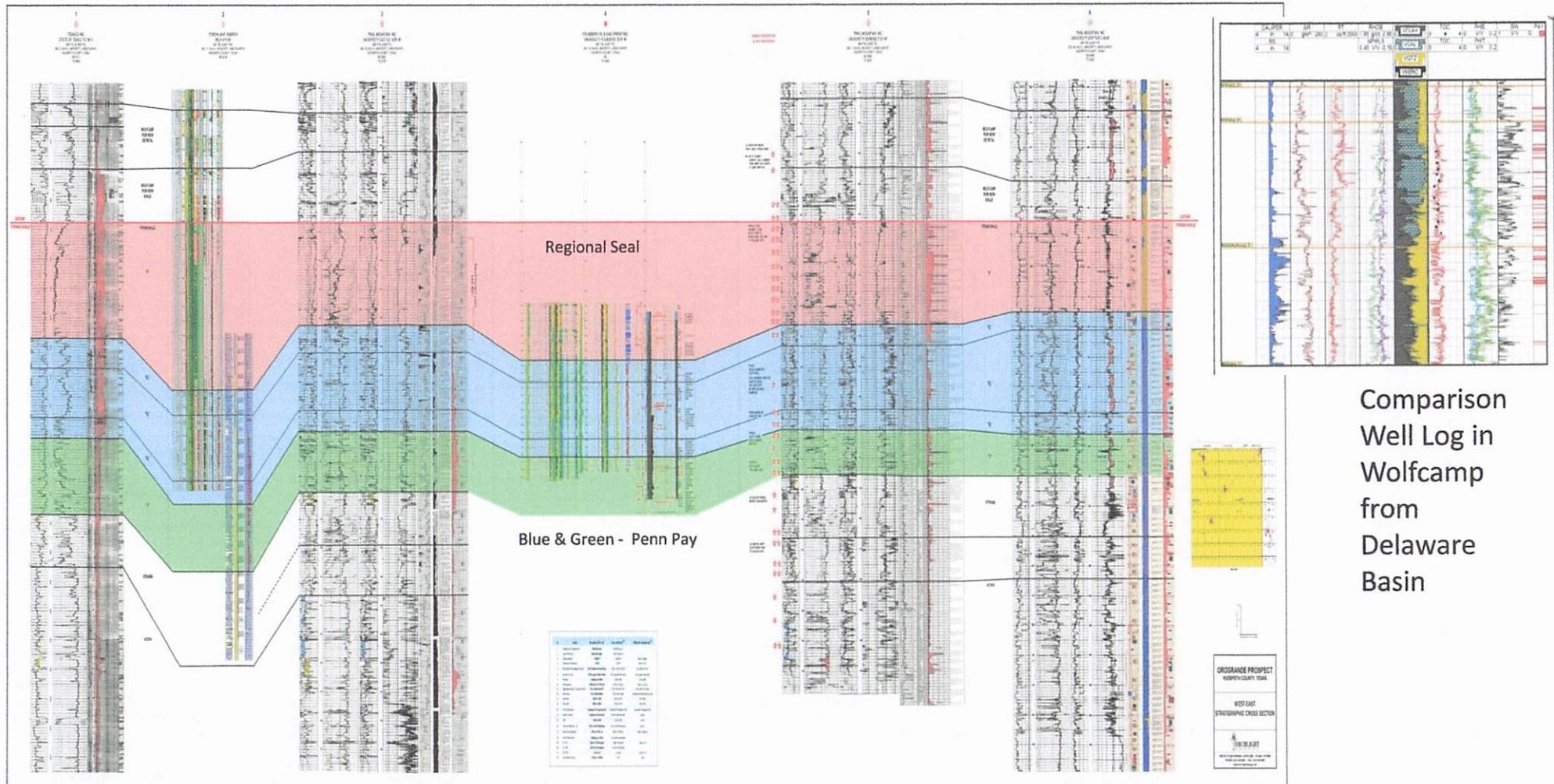
Orogrande Checklist (Univ. Rich A11)



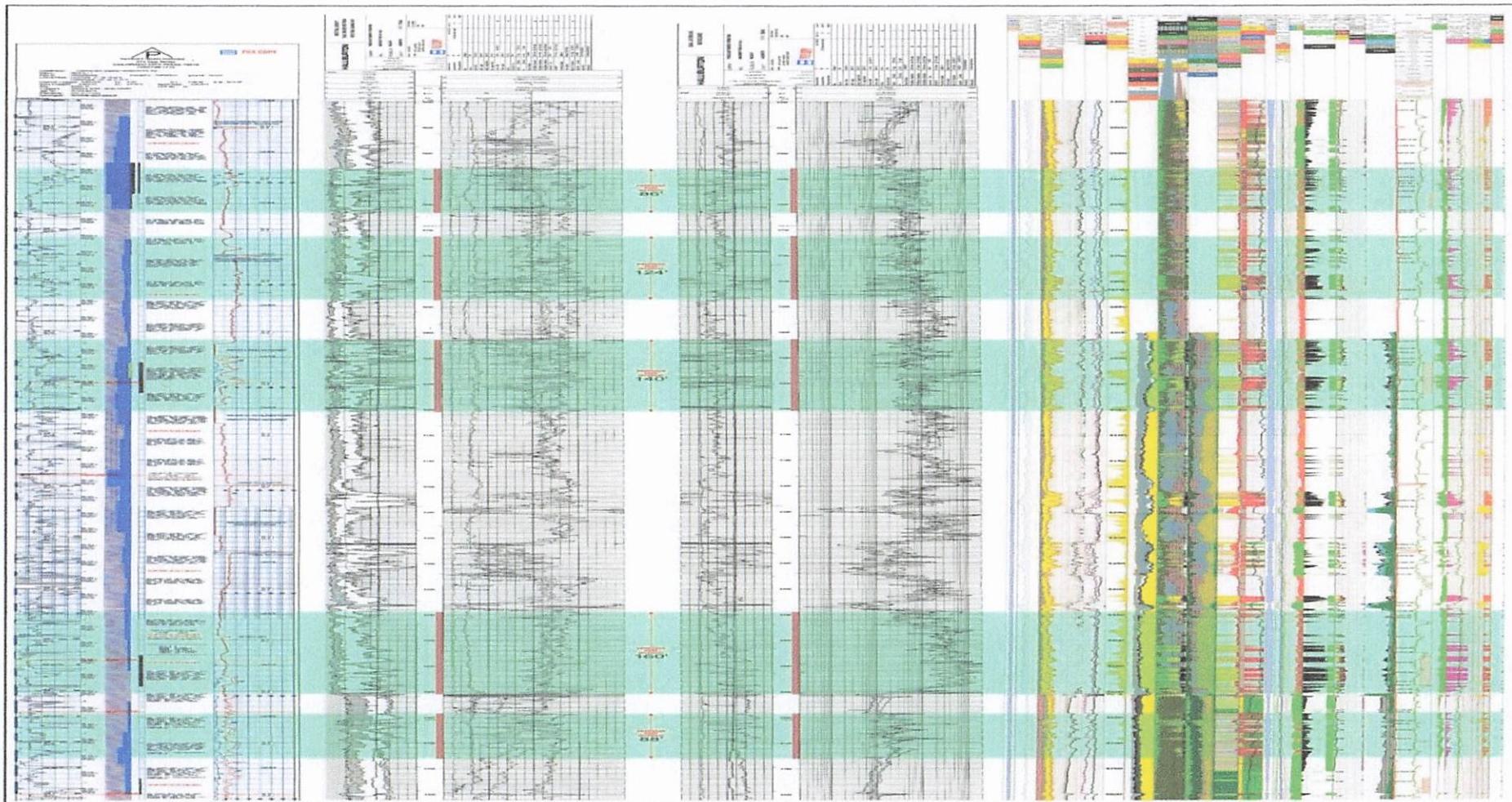
#	Items	Present ?	Description	Midland Comparison *
1	Huge Contiguous Acreage Block	✓	134,000 acres	
2	Low Initial Costs	✓	Deal Structure	
3	Shallow Depth	✓	< 6200 ft.	7800' to 9000'
4	Thickness of Reservoir	✓	~ 700 ft.	300' to 700'
5	Mud Log Chromatograph Shows	✓	200 to 700 GU w/C4	50 to 600 CU w/C4
6	Sample Oil Cuts	✓	fair to good flash white	fair to good bwh flash
7	Porosity	✓	4.5% to 9%	3.5% to 8%
8	Permeability	✓	.001 to .05 md	.0001 to .05 md
9	High Resistivities / Invasion Profile	✓	35 to 160 ohms RT	25 to 200+ RT (in silt)
10	Brittleness	✓	No Ductile shale	Scattered Ductile high clay units
11	Low Clay	✓	12% to 27%	15 to 46%
12	Silica Rich	✓	35% to 55%	30% to 55%
13	Thin Carbonates	✓	Scattered Throughout Silt	Scattered Throughout Silt
14	Calcite Cement	✓	calcite and dolomite	calcite
15	TOC	✓	1.8-3.08	.4 to 6
16	Thermal Maturity - Ro	✓	.81-.90 Oil Window	.8 to 1.1
17	Matrix Permeability	✓	850-1700 nanodarcies	400 to 1300 nanodarcies
18	Pore Throat Sizes	✓	10 to 350 nanometers	
19	Hi / Oi	✓	Type II Kerogen	Type II / III
20	Si / TOC	✓	55-61 oil mature	
21	S2 / TOC	✓	2 to 2.8	2.05 to 2.5
22	Gas Filled Porosity	✓	2.65	2.08

* Published core data from Wolfcamp wells in Reagan and Upton Counties, Midland Basin

Stratigraphic Cross-Section Crossing Torchlight Acreage

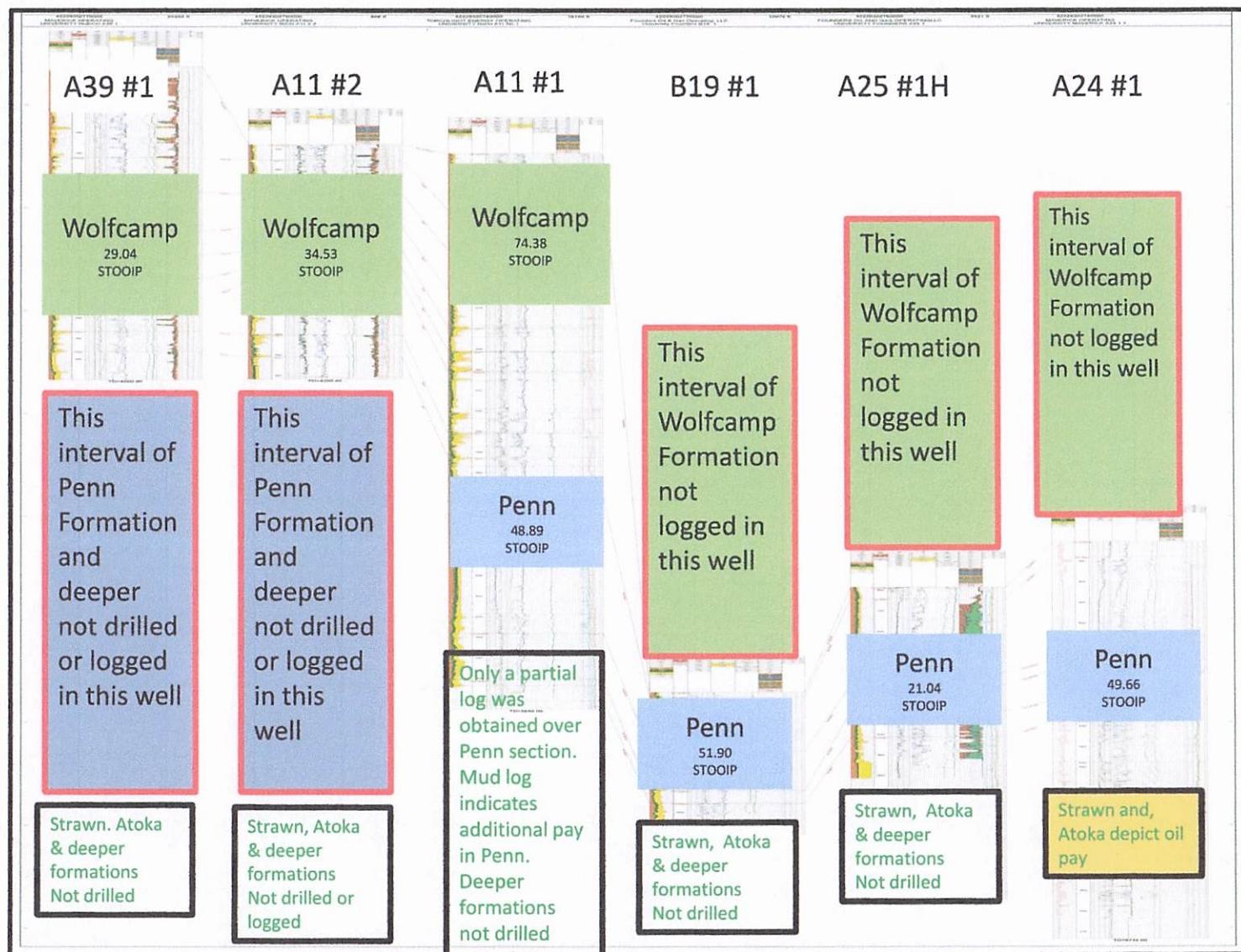


Potential Wolfcamp Landing Zones

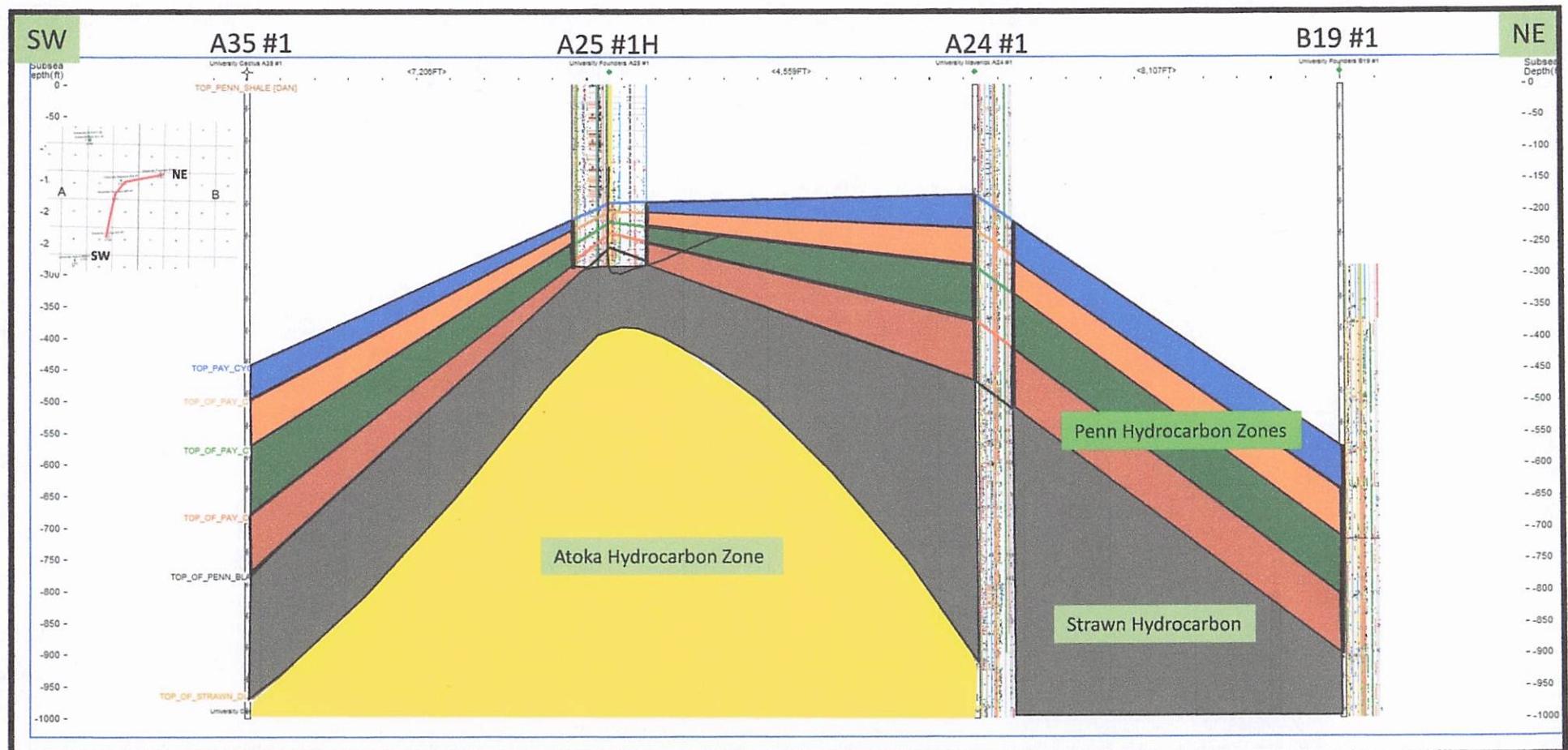


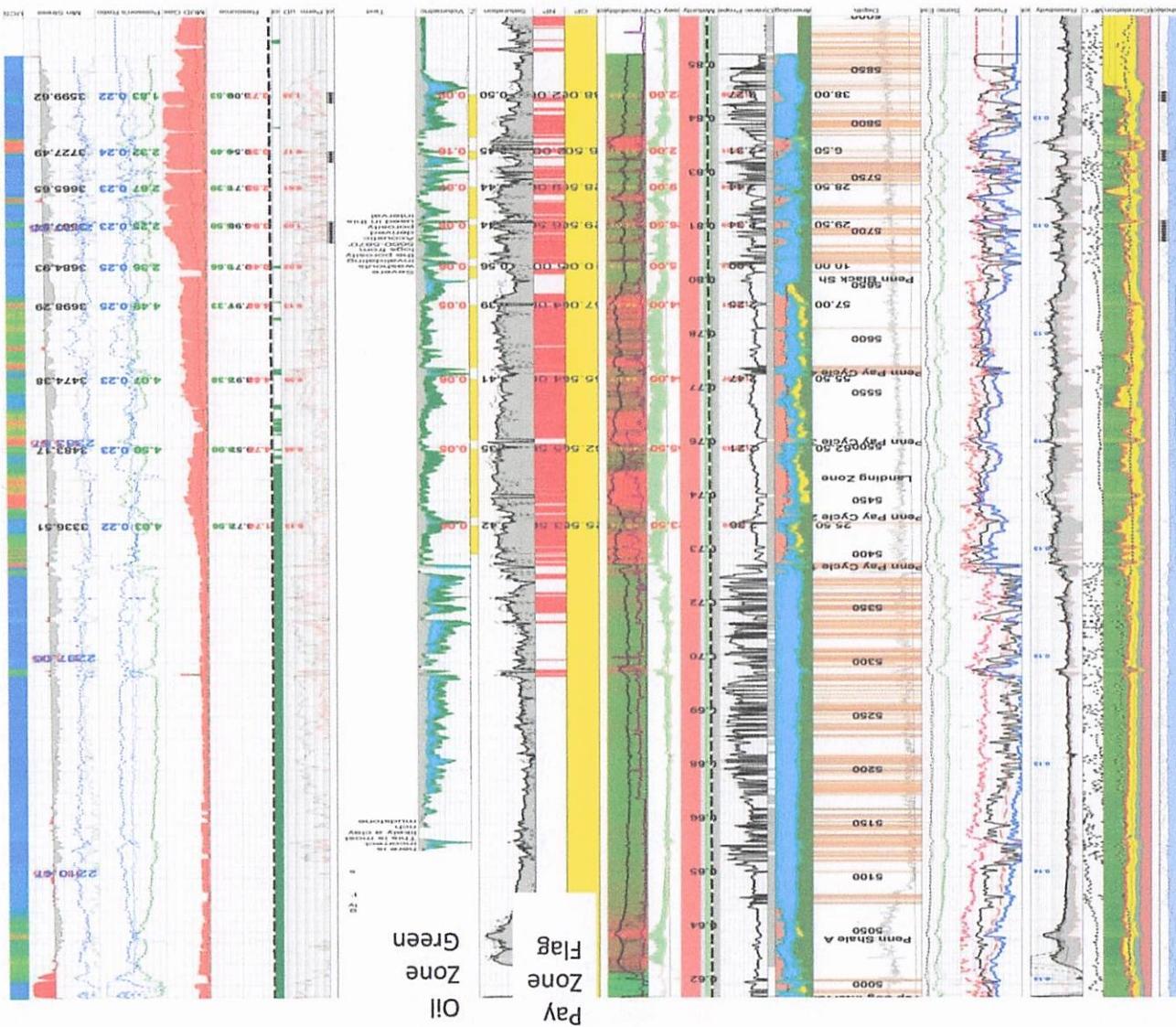
Regional Petrophysical Cross-Section

Illustration of variable depths in project area



Structural Cross-Section over A25 #1 & A24 #1 (SS')



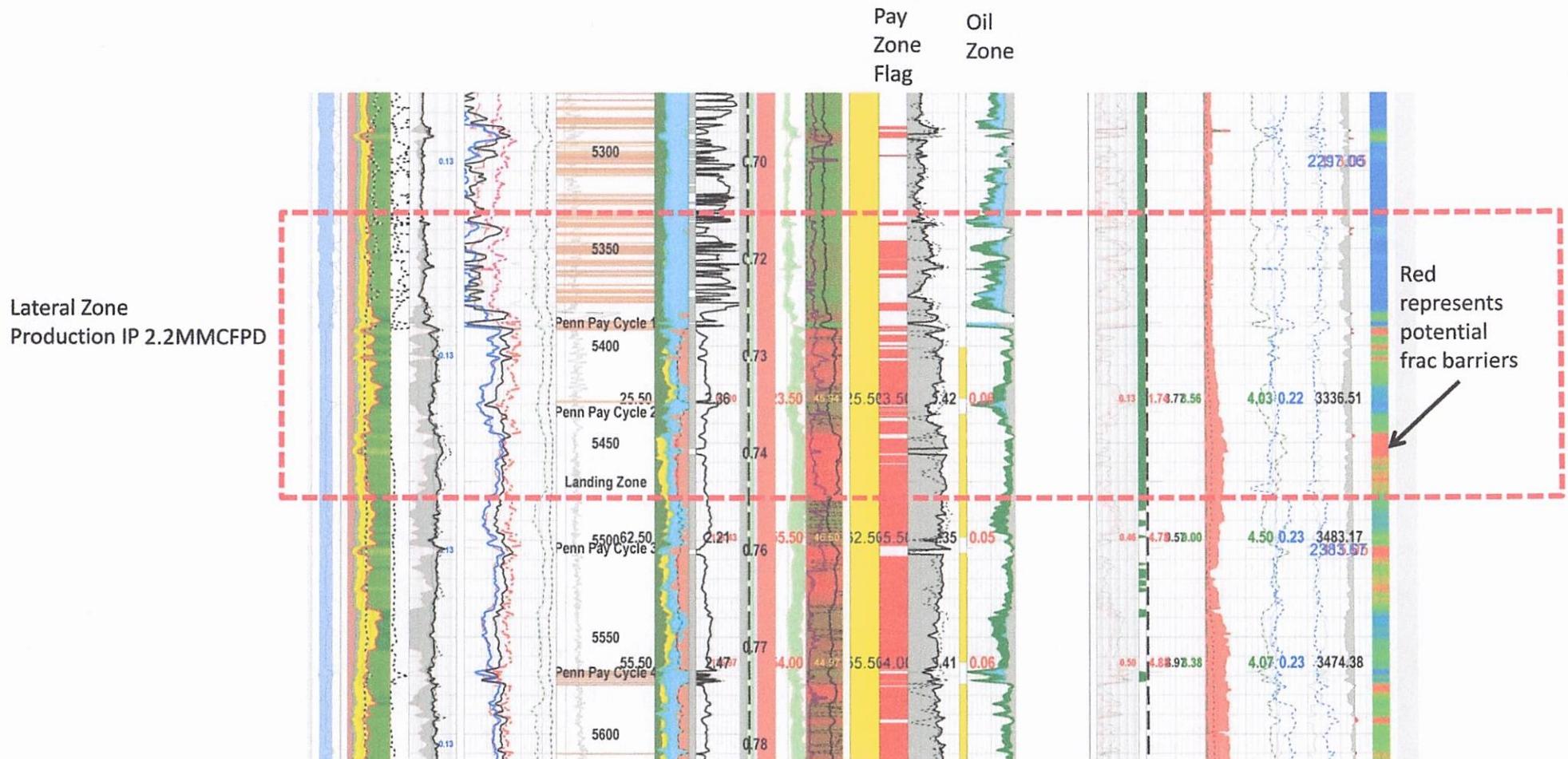


	A	B	C	D	E	F	G
1	Date	Tubing PSI	Casing PSI	Oil Total	Water Total	Gas Total MCF	
2	10/10/18	1450	20	0	0	830	
3	10/11/18	700	0	32	220	1918	
4	10/12/18	550	20	0	27	1564	
5	10/13/18	450	20	0	22	1411	
6	10/14/18	450	20	0	28	1396	
7	10/15/18	450	20	0	22	1275	
8	10/16/18	450	20	0	26	1226	
9	10/17/18	440	20	0	24	1240	
10	10/18/18	430	20	0	25	1268	
11	10/19/18	420	20	0	23	1226	
12	10/20/18	420	20	0	26	1218	
13	10/21/18	420	20	0	24	1222	
14	10/22/18	420	20	0	26	1221	
15	10/23/18	420	20	0	25	1232	
16	10/24/18	420	20	0	26	1207	
17	10/25/18	420	20	0	24	1201	
18	10/26/18	420	20	0	26	1222	
19	10/27/18	420	20	0	24	1221	
20	10/28/18	420	20	0	25	1231	
21	10/29/18	420	20	0	26	1230	
22	10/30/18	420	20	0	24	1201	
23	10/31/18	420	20	0	26	1222	
24	11/1/18	420	20	0	25	1230	

Production Test A25 #1H Daily Totals

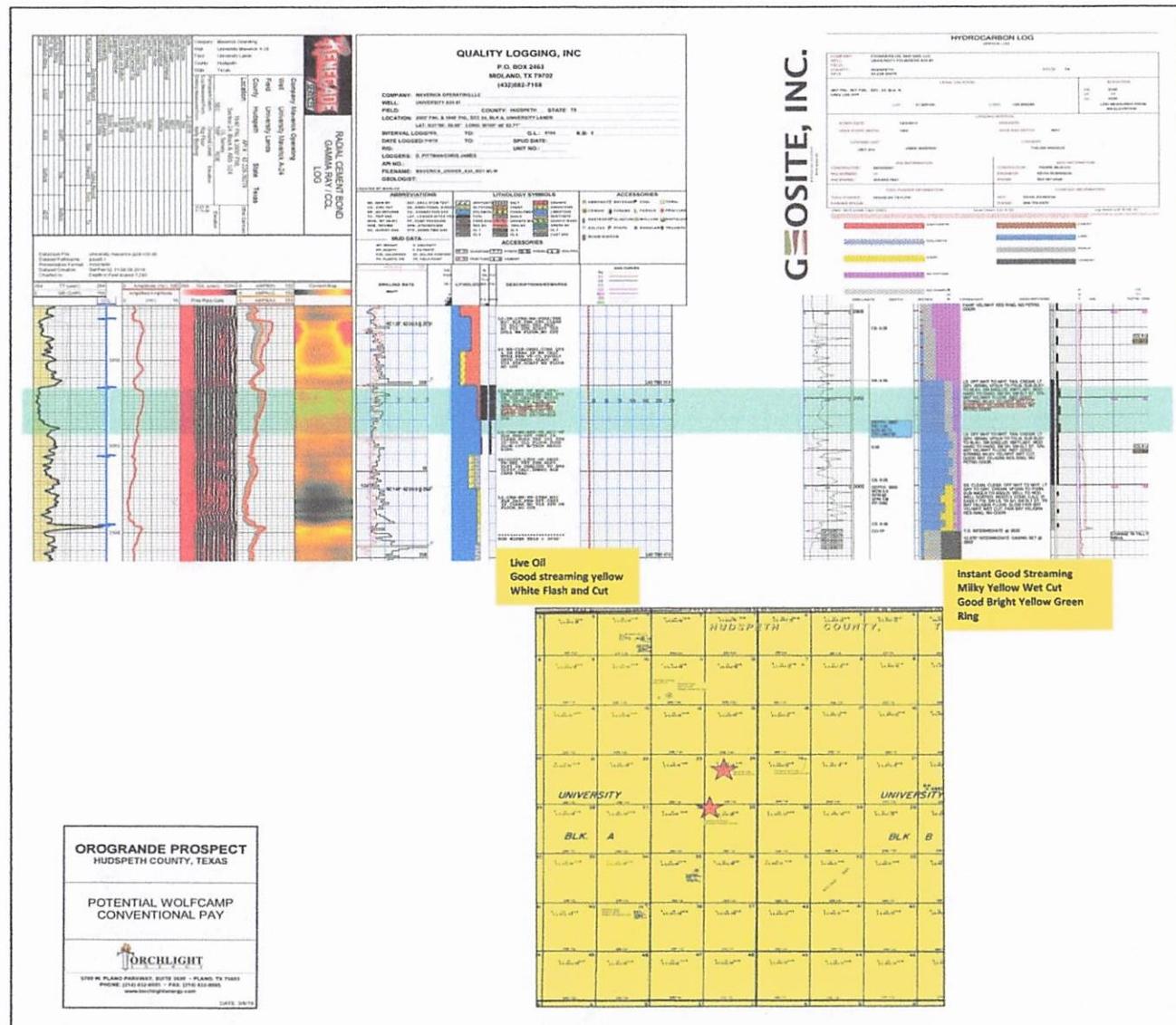
A25 #1H
Stimulation
Petrophysics

A25 #1H Zoom of Horizontal Frac Zone



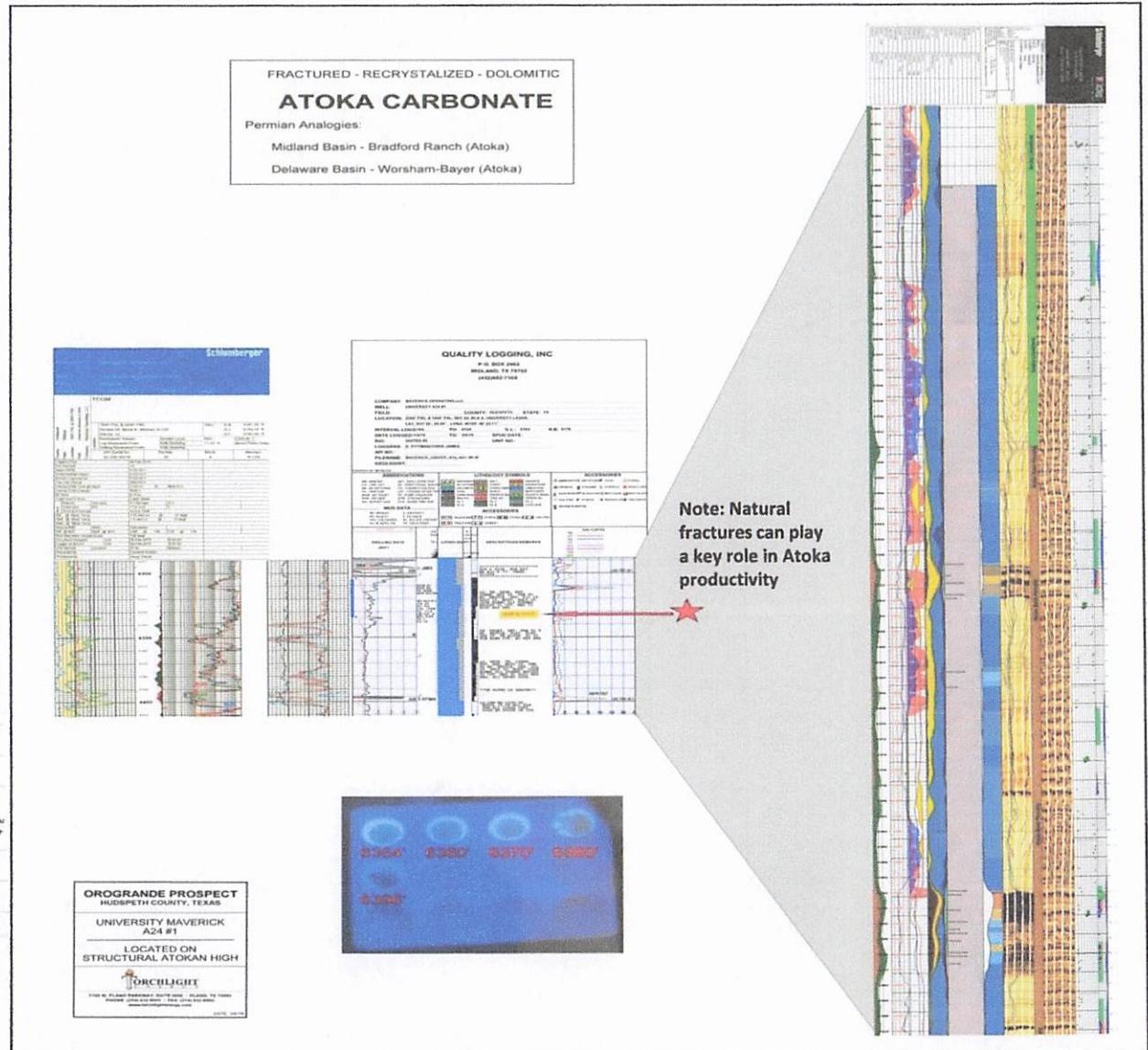
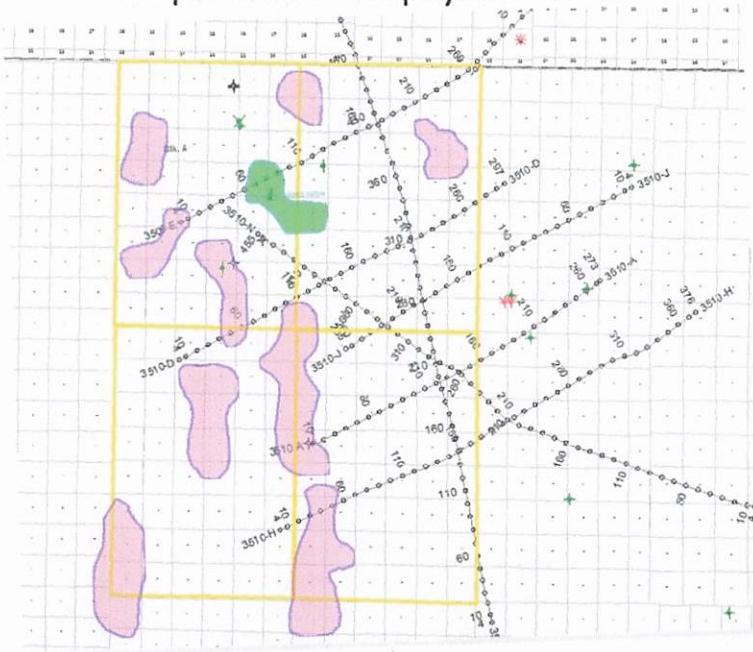
Conventional Wolfcamp Potential

A24 #1



Atoka Formation Potential A24 #1

Map of Atoka Geophysical leads



Rich A11 #1 SCAL

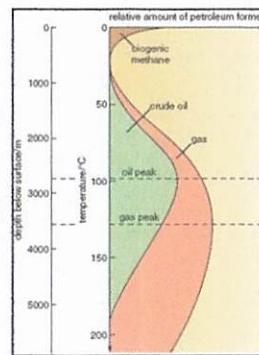
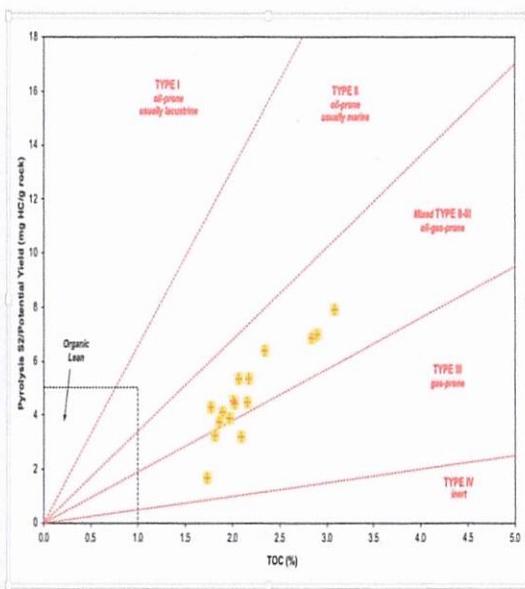
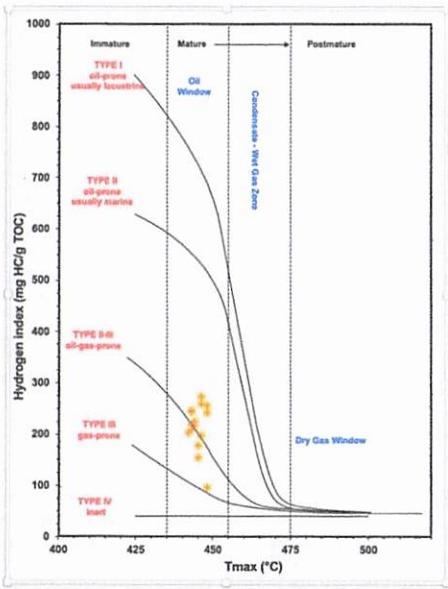


Table of Source Rock Criteria

Potential (Quantity)	TOC (wt.%)	Rock-Eval (mg/g rk)	Bitumen (ppm)	Hydrocarbons (ppm)		
Kerogen (Quality)		S1	S2			
Poor	< 0.5	< 0.5	< 2.5	< 500	< 300	
Fair	0.5-1	0.5-1	2.5-5	500-1000	300-600	
Good	1-2	1-2	5-10	1000-2000	600-1200	
V. Good	2-4	2-4	10-20	2000-4000	1200-2400	
Excellent	> 4	> 4	> 20	> 4000	> 2400	
Kerogen (Quality)	Hydrogen Index (mg HC/g TOC)	S2/S3	Atomic H/C	Main Product at Peak Maturity		
I	> 600	> 15	> 1.5	Oil		
II	300-600	10-15	1.2 - 1.5	Oil		
II/III	200-300	5-10	1.0 - 1.2	Oil/Gas		
III	50-200	1-5	0.7 - 1.0	Gas		
IV	< 50	< 1	< 0.7	None		
Maturity	Maturation		Generation			
	Ro (%)	Tmax (°C)	TAI	Bit/TOC*	Bitumen (mg/g rk) [S1/(S1+S2)]	
Immature	0.20-0.60	< 435	1.5-2.6	< 0.05	< 50	< 0.10
Mature						
Early	0.60-0.65	435-445	2.6-2.7	0.05-0.10	50-100	0.10-0.15
Peak	0.65-0.90	445-450	2.6-2.7	0.15-0.25	150-250	0.25-0.40
Late	0.90-1.35	450-470	2.9-3.3	--	--	> 0.40
Postmature	> 1.35	> 470	> 3.3	--	--	--

MIDLAND BASIN: MULTISTACKED HORIZONTAL TARGETS

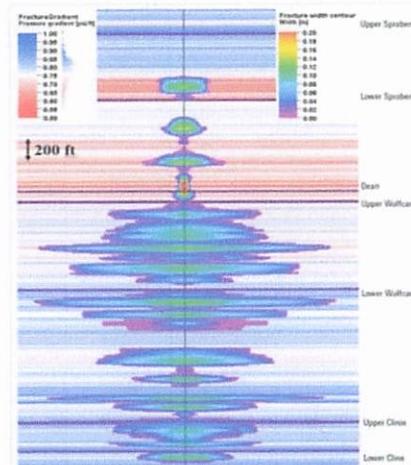
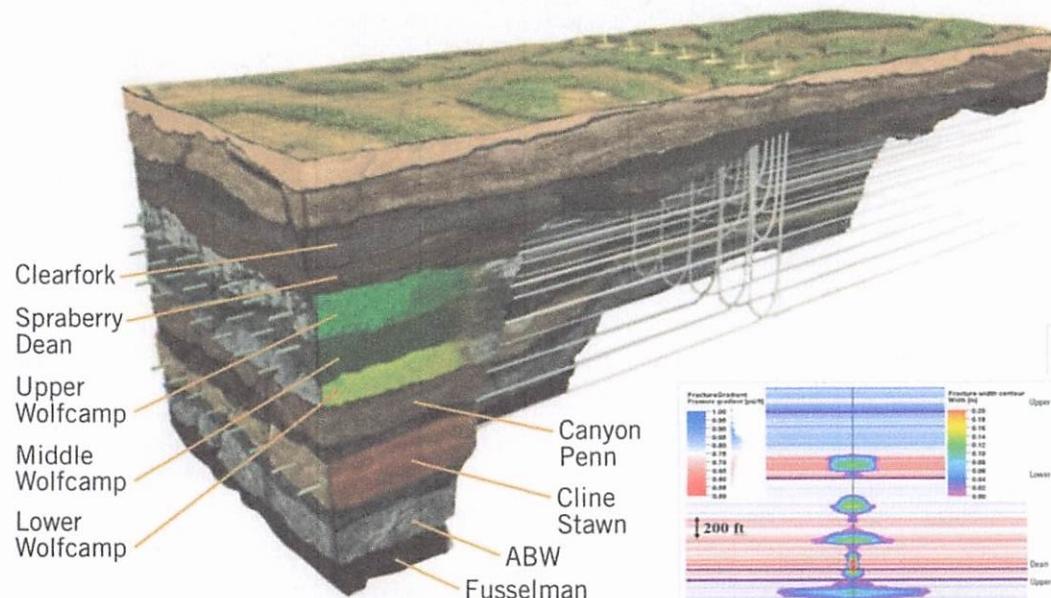


Figure 2: Results of fully 3-D planar fracture simulations on 20 landing points (fracture height).

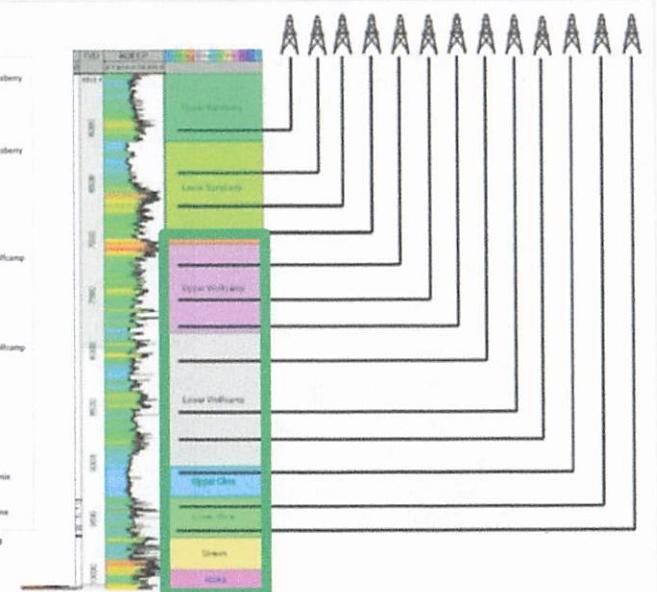
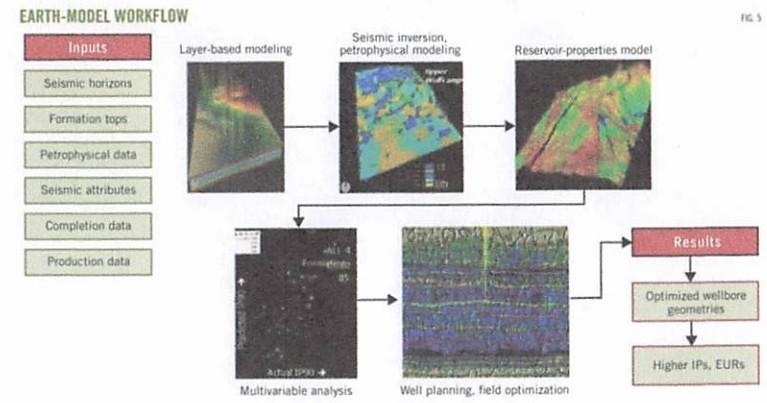
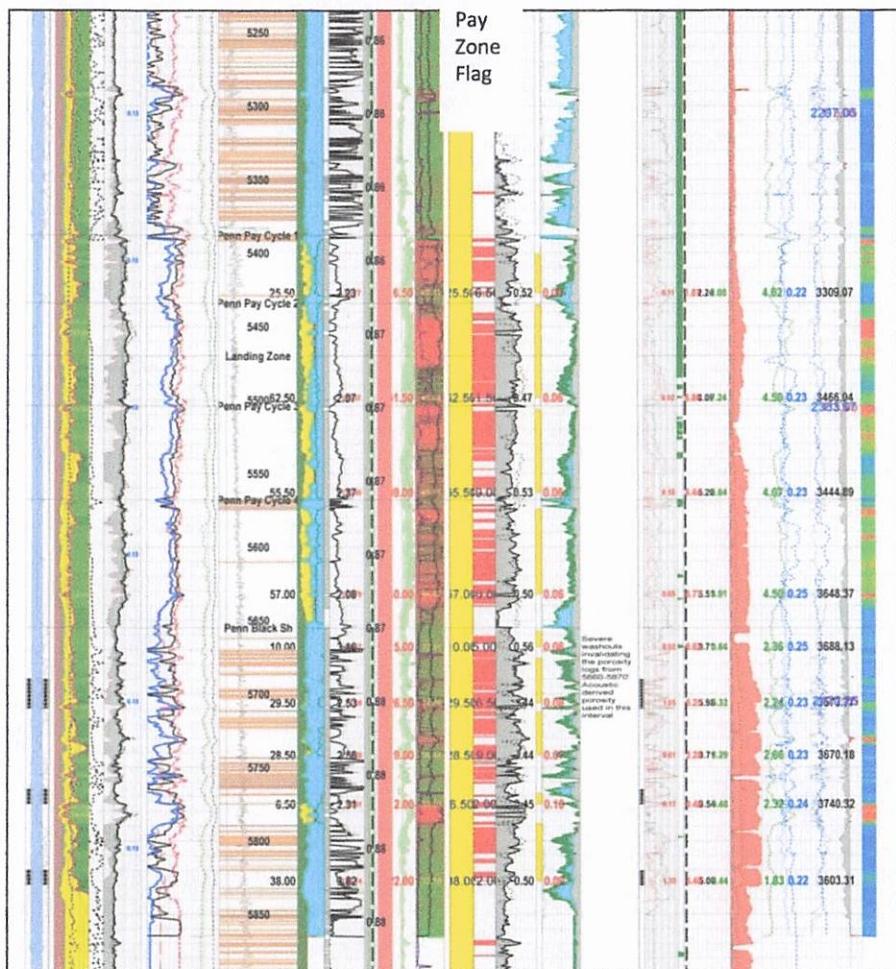
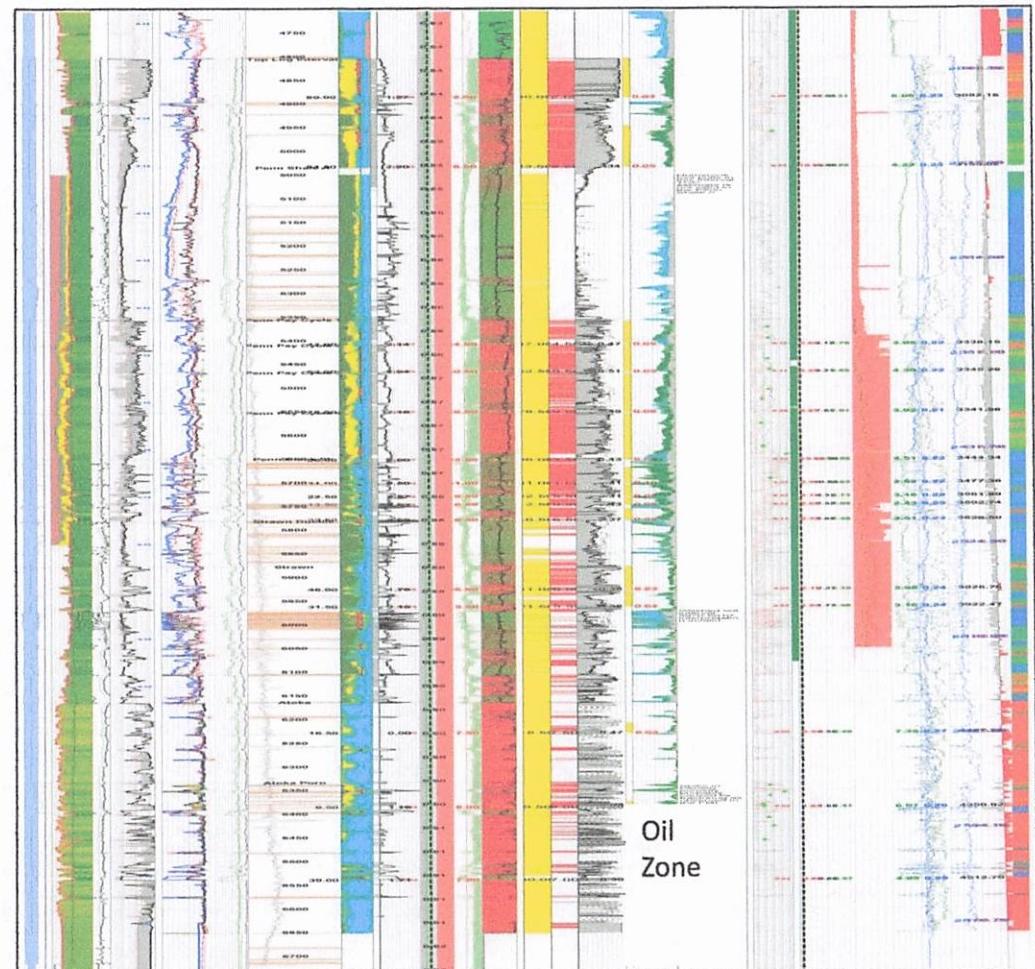


Figure 1: Typical log response and potential targets in Midland basin.

A25 #1H



A24 #1



Resource Estimation by Zone

Recoverable Reserves Estimate (based on petrophysical analysis of existing wells)

Primary Unconventional Reserve Estimate

• Wolfcamp pay zone	820 MMBOE	recoverable reserves
• Penn pay zone	1205 MMBOE	recoverable reserves
• Strawn pay zone	31 MMBOE	recoverable reserves
• Atoka pay zones	7 MMBOE	recoverable reserves

- Primary Unconventional sub-total estimated reserves: **2,065 MMBOE** recoverable reserves
- Additional Unconventional Reserve Estimate
 - Barnett pay zone 591 MMBOE
 - Woodford pay zone 1018 MMBOE
- Additional Unconventional sub-total estimated reserves: **1,609 MMBOE** recoverable reserves
- Total Possible Unconventional reserves: **3,674 MMBOE** recoverable reserves
- Conventional Reserves would be accretive to this number

Orogrande Project Summary

- Torchlight Energy has collected key G&G data and is now ready to market the project

Potential Recoverable Reserves

• Primary Unconventional reserve estimate:	2,065 MMBOE recoverable reserves
• Additional Unconventional reserve estimate:	<u>1,609 MMBOE recoverable reserves</u>
• Total Possible Unconventional reserves estimate:	3,674 MMBOE recoverable reserves

- Conventional Potential: work in progress (no reserve estimates at this time)

All G&G data are presently being integrated into a comprehensive project

- Regional seismic, gravity and magnetic mapping tied to existing well control
 - Unconventional and conventional targets
- Focused petrophysics to optimize reservoir understanding and identify best zones for completions and horizontal drilling
- Geomechanical analysis to aid in fracture models and optimize future drilling program
- Proven Working Petroleum System
- 134,000 acres leased (209 equivalent 640 sections)
- 5 pilot wells and one productive horizontal well the A25 #1H - 2.2 MMCFPD
- The A24 #1 well indicates conventional structures are present as additional targets (20,000 acre potential)
- Atoka put OIL on pits in A24 #1



